Sexually Transmitted Diseases

Updated Summary of 2010 CDC Treatment Guidelines

Centers for Disease Control and Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

These summary guidelines reflect the August 2012 update to the *2010 CDC Guidelines for Treatment of Sexually Transmitted Diseases.* CDC issues new recommendations for treating uncomplicated gonorrhea in this update.

This summary is intended as a source of clinical guidance. When more than one therapeutic regimen is recommended the sequence is in alphabetical order unless the choices for therapy are prioritized based on efficacy, cost, or convenience. The recommended regimens should be used primarily; alternative regimens can be considered in instances of substantial drug allergy or other contraindications. An important component of STD treatment is partner management. Providers can arrange for the evaluation and treatment of sex partners either directly or with assistance from state and local health departments.

Complete guidelines can be viewed online at www.cdc.gov/std/treatment/2010.

This booklet has been reviewed by the CDC 8/2012.

◆ Indicates revision from the *2006 CDC Guidelines for the Treatment of Sexually Transmitted Diseases.*

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Bacterial Vaginosis

	Recommended Rx		Dose/Route	Alternatives
Nonpregnant women	metronidazole oral[1]	OR	500 mg orally 2x/day for 7 days	◆ tinidazole 2 g orally 1x/day for 2 days OR ◆ tinidazole 1 g orally 1x/day for 5 days OR clindamycin 300 mg orally 2x/day for 7 days OR clindamycin ovules 100 mg intravaginally at bedtime for 3 days
	metronidazole gel 0.75%[1]	OR	One 5 g applicator intravaginally 1x/day for 5 days	
	clindamycin cream 2%[1,2]		One 5 g applicator intravaginally at bedtime for 7 days	
Pregnancy[3,4]	metronidazole oral[1]	OR	500 mg orally 2x/day for 7 days or 250 mg orally 3x/day for 7 days	
	clindamycin oral		300 mg orally 2x/day for 7 days; See complete guidelines for dosing	

Cervicitis[5]

Recommended Rx		Dose/Route	Alternatives
azithromycin	OR	1 g orally in a single dose	
doxycycline[6]		100 mg orally 2x/day for 7 days	

Chlamydial Infections

	Recommended Rx		Dose/Route	Alternatives	
Adults, adolescents and children aged ≥8 years	azithromycin doxycycline[6]	OR	1 g orally in a single dose 100 mg orally 2x/day for 7 days	erythromycin base[7] 500 mg orally 4x/day for 7 days erythromycin ethylsuccinate[8] 800 mg orally 4x/day for 7 days levofloxacin[9] 500 mg 1x/day orally for 7 days ofloxacin[9] 300 mg orally 2x/day for 7 days	OR OR OR
Pregnancy[3]	azithromycin[10] amoxicillin	OR	1 g orally in a single dose 500 mg orally 3x/day for 7 days	erythromycin base[7,11] 500 mg orally 4x/day for 7 days erythromycin base 250 mg orally 4x/day for 14 days erythromycin ethylsuccinate 800 mg orally 4x/day for 7 days erythromycin ethylsuccinate 400 mg orally 4x/day for 14 days	OR OR OR
Children (<45 kg): urogenital, rectal	erythromycin base[12] or ethylsuccinate		50 mg/kg/day orally (4 divided doses) daily for 14 days		
Neonates: opthalmia neonatorum, pneumonia	erythromycin base[12] or ethylsuccinate		50 mg/kg/day orally (4 divided doses) daily for 14 days		

Epididymitis[13,14]

	Recommended Rx		Dose/Route	Alternatives
For acute epididymitis most likely due to enteric organisms or with negative GC culture or NAAT:	ceftriaxone	PLUS	250 mg IM in a single dose	
	doxycycline		100 mg orally 2x/day for 10 days	
	levofloxacin	OR	500 mg orally 1x/day for 10 days	
	ofloxacin		300 mg orally 2x/day for 10 days	

Genital Herpes Simplex

	Recommended Rx		Dose/Route	Alternatives
First clinical episode of genital herpes	acyclovir	OR	400 mg orally 3x/day for 7-10 days[16]	
	acyclovir	OR	200 mg orally 5x/day for 7-10 days[16]	
	famciclovir[15]	OR	250 mg orally 3x/day for 7-10 days[16]	
	valacyclovir[15]		1 g orally 2x/day for 7-10 days[16]	
Episodic therapy for recurrent genital herpes	acyclovir	OR	400 mg orally 3x/day for 5 days	
	acyclovir	OR	800 mg orally 2x/day for 5 days	
	acyclovir	OR	800 mg orally 3x/day for 2 days	
	famciclovir[15]	OR	125 mg orally 2x/day for 5 days	
	famciclovir[15]	OR	1000 mg orally 2x/day for 1 day[16]	
	famciclovir[15]	OR	◆ 500 mg orally once, followed by 250 mg 2x/day for 2 days	
	valacyclovir[15]	OR	500 mg orally 2x/day for 3 days	
	valacyclovir[15]		1 g orally 1x/day for 5 days	
Suppressive therapy[17] for recurrent genital herpes	acyclovir	OR	400 mg orally 2x/day	
	famciclovir[15]	OR	250 mg orally 2x/day	
	valacyclovir[15]	OR	500 mg orally once a day	
	valacyclovir[15]		1 g orally once a day	
Recommended regimens for episodic infection in persons with HIV infection	acyclovir	OR	400 mg orally 3x/day for 5-10 days	
	famciclovir[15]	OR	500 mg orally 2x/day for 5-10 days	
	valacyclovir[15]		1 g orally 2x/day for 5-10 days	
Recommended regimens for daily suppressive therapy in persons with HIV infection	acyclovir	OR	400-800 mg orally 2-3x/day	
	famciclovir[15]	OR	500 mg orally 2x/day	
	valacyclovir[15]		500 mg orally 2x/day	

Genital Warts *(Human Papillomavirus)*[18]

	Recommended Rx		Dose/Route	Alternatives	
External genital and perianal warts	**Patient Applied**				
	podofilox 0.5%[15] solution or gel	OR	Apply to visible warts 2x/day for 3 days, rest 4 days, 4 cycles max.		
	imiquimod 5%[15] cream	OR	Apply once h.s., wash off after 6-10 hours 3x/week QOD, 16 weeks max.		
	◆ sinecatechins 15% ointment[2,15]		Apply 3x/day, 16 weeks max; See complete CDC guidelines.		
	Provider Administered				
	Cryotherapy	OR			
	podophyllin resin 10%-25%[15]	OR	Apply small amount, dry, wash off in 1-4 hours. Repeat weekly if necessary	Intralesional interferon	OR
	trichloroacetic acid or bichloroacetic acid 80%-90%	OR	Apply small amount, dry, apply weekly if necessary	Laser surgery	
	surgical removal				

★ Gonococcal Infections[19]

	Recommended Rx		Dose/Route	Alternatives	
Adults, adolescents, and children >45 kg: urogenital, rectal	ceftriaxone	OR	◆ 250 mg IM in a single dose	cefixime[20] 400 mg orally in a single dose azithromycin[10] 1 g orally in a single dose	PLUS OR
	PLUS azithromycin[10] doxycycline[6]	OR	1 g orally in a single dose 100 mg orally 2x/day for 7 days	doxycycline[6] 100 mg 2x/day for 7 days test-of-cure	PLUS
				If the patient has severe cephalosporin allergy: azithromycin 2 g orally in a single dose test-of-cure	PLUS
◆ Pharyngeal[21]	ceftriaxone		250 mg IM in a single dose		
	PLUS azithromycin[10] doxycycline[6]	OR	1 g orally in a single dose 100 mg orally 2x/day for 7 days		
Pregnancy[3]	See complete CDC guidelines.				
Adults and adolescents: conjunctivitis	ceftriaxone		1 g IM in a single dose; irrigate infected eye with saline solution once		
Children (≤45 kg): urogenital, rectal, pharyngeal	ceftriaxone[22]		◆ 125 mg IM in a single dose		

Lymphogranuloma venereum

Recommended Rx	Dose/Route	Alternatives
doxycycline[6]	100 mg orally 2x/day for 21 days	erythromycin base 500 mg orally 4x/day for 21 days

Nongonococcal Urethritis (NGU)

	Recommended Rx		Dose/Route	Alternatives	
	azithromycin[10]	OR	1 g orally in a single dose	erythromycin base[7] 500 mg orally 4x/day for 7 days	OR
	doxycycline[6]		100 mg orally 2x/day for 7 days	erythromycin ethylsuccinate[8] 800 mg orally 4x/day for 7 days	OR
				levofloxacin 500 mg 1x/day for 7 days	OR
				ofloxacin 300 mg 2x/day for 7 days	
Recurrent NGU[3,23,24]	metronidazole[25]	OR	2 g orally in a single dose		
	tinidazole	PLUS	2 g orally in a single dose		
	azithromycin (if not used for initial episode)		1 g orally in a single dose		

Pediculosis Pubis

Recommended Rx	Dose/Route	Alternatives
permethrin 1% cream rinse OR	Apply to affected area, wash off after 10 minutes	malathion 0.5% lotion, applied 8-12 hrs then washed off OR
pyrethrins with piperonyl butoxide	Apply to affected area, wash off after 10 minutes	ivermectin 250 µg/kg orally, repeated in 2 weeks

Pelvic Inflammatory Disease[13]

Recommended Rx		Dose/Route	Alternatives
1. ceftriaxone	PLUS	250 mg IM in a single dose	
doxycycline		100 mg orally 2x/day for 14 days	
	WITH OR WITHOUT		
metronidazole		500 mg orally 2x/day for 14 days	
2. cefoxitin	PLUS	2 g IM in a single dose and probenecid, 1 g, orally administered concurrently in a single dose	
doxycycline		100 mg orally 2x/day for 14 days	
	WITH OR WITHOUT		
metronidazole		500 mg orally 2x/day for 14 days	
3. Other parenteral third-generation cephalosporin (e.g. ceftizoxime or cefotaxime)	PLUS		
doxycycline		100 mg orally 2x/day for 14 days	
	WITH OR WITHOUT		
metronidazole		500 mg orally 2x/day for 14 days	

Alternative oral regimens are listed in CDC's 2010 STD Treatment Guidelines.

Scabies

Recommended Rx	Dose/Route	Alternatives
permethrin 5% cream OR	Apply to all areas of body from neck down, wash off after 8-14 hours	lindane 1%[26,27] 1 oz. of lotion or 30 g of cream, applied thinly to all areas of the body from the neck down, wash off after 8 hours
ivermectin	200 µg/kg orally, repeated in 2 weeks	

Syphilis

	Recommended Rx	Dose/Route	Alternatives
Primary, secondary, or early latent <1 year	benzathine penicillin G	2.4 million units IM in a single dose	doxycycline[6,28] 100 mg 2x/day for 14 days OR tetracycline[6,28] 500 mg orally 4x/day for 14 days
Latent >1 year, latent of unknown duration	benzathine penicillin G	2.4 million units IM in 3 doses each at 1 week intervals (7.2 million units total)	doxycycline[6,28] 100 mg 2x/day for 28 days OR tetracycline[6,28] 500 mg orally 4x/day for 28 days
Pregnancy[3]	See complete CDC guidelines.		
Neurosyphilis	aqueous crystalline penicillin G	3 to 4 million units IV every 4 hours for 10-14 days (18-24 million units/day)	procaine penicillin G 2.4 MU IM 1x daily PLUS probenecid 500 mg orally 4x/day, both for 10-14 days.
Congenital syphilis	aqueous crystalline penicillin G OR	100,000-150,000 units/kg/day (50,000 units/kg/dose IV every 12 hours) during the first 7 days of life and every 8 hours thereafter for a total of 10 days	
	procaine penicillin G	50,000 units/kg/dose IM in a single dose for 10 days	
Children: Primary, secondary, or early latent <1 year	benzathine penicillin G	50,000 units/kg IM in a single dose (maximum 2.4 million units)	
Children: Latent >1 year, latent of unknown duration	benzathine penicillin G	50,000 units/kg IM for 3 doses at 1 week intervals (maximum total 7.2 million units)	

Trichomoniasis

Recommended Rx		Dose/Route	Alternatives
metronidazole[25]	OR	2 g orally in a single dose	metronidazole[25] 500 mg 2x/day for 7 days
tinidazole[29]		2 g orally in a single dose	

Notes

1. The recommended regimens are equally efficacious.
2. These creams are oil-based and may weaken latex condoms and diaphragms. Refer to product labeling for further information.
3. Please refer to the complete 2010 CDC Guidelines for recommended regimens.
4. Existing data do not support the use of topical agents in pregnancy.
5. Consider concurrent treatment for gonococcal infection if prevalence of gonorrhea is >5% (younger age).
6. Should not be administered during pregnancy, lactation, or to children <8 years of age.
7. If patient cannot tolerate high-dose erythromycin base schedules, change to 250 mg 4x/day for 14 days.
8. If patient cannot tolerate high-dose erythromycin ethylsuccinate schedules, change to 400 mg orally 4 times a day for 14 days.
9. Contraindicated for pregnant or lactating women.
10. Clinical experience and published studies suggest that azithromycin is safe and effective.
11. Erythromycin estolate is contraindicated during pregnancy.
12. Effectiveness of erythromycin treatment is approximately 80%; a second course of therapy may be required.
13. Patients who do not respond to oral therapy (within 72 hours) should be re-evaluated.
14 For patients with suspected sexually transmitted epididymitis, close follow-up is essential.
15. No definitive information available on prenatal exposure.
16. Treatment may be extended if healing is incomplete after 10 days of therapy.

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Notes

Notes (continued)

17. Consider discontinuation of treatment after one year to assess frequency of recurrence.
18. Vaginal, cervical, urethral meatal, and anal warts may require referral to an appropriate specialist.
19. CDC recommends that treatment for uncomplicated gonococcal infections of the cervix, urethra, and/or rectum should include dual therapy, i.e. both a cephalosporin (e.g. ceftriaxone) plus azithromycin (preferred) or doxycycline.
20. CDC recommends that cefixime in combination with azithromycin or doxycycline be used as an alternative when ceftriaxone is not available.
21. Only ceftriaxone is recommended for the treatment of pharyngeal infection. Providers should inquire about oral sexual exposure
22. Use with caution in hyperbilirubinemic infants, especially those born prematurely.
23. MSM are unlikely to benefit from the addition of nitroimidazoles.
24. Moxifloxacin 400mg orally 1x/day for 7 days effective against *Mycoplasma genitalium*
25. Pregnant patients can be treated with 2 g single dose.
26. Contraindicated for pregnant or lactating women, or children <2 years of age.
27. Do not use after a bath; should not be used by persons who have extensive dermatitis.
28. Pregnant patients allergic to penicillin should be treated with penicillin after desensitization.
29. Randomized controlled trials comparing single 2 g doses of metronidazole and tinidazole suggest that tinidazole is equivalent to, or superior to, metronidazole in achieving parasitologic cure and resolution of symptoms.

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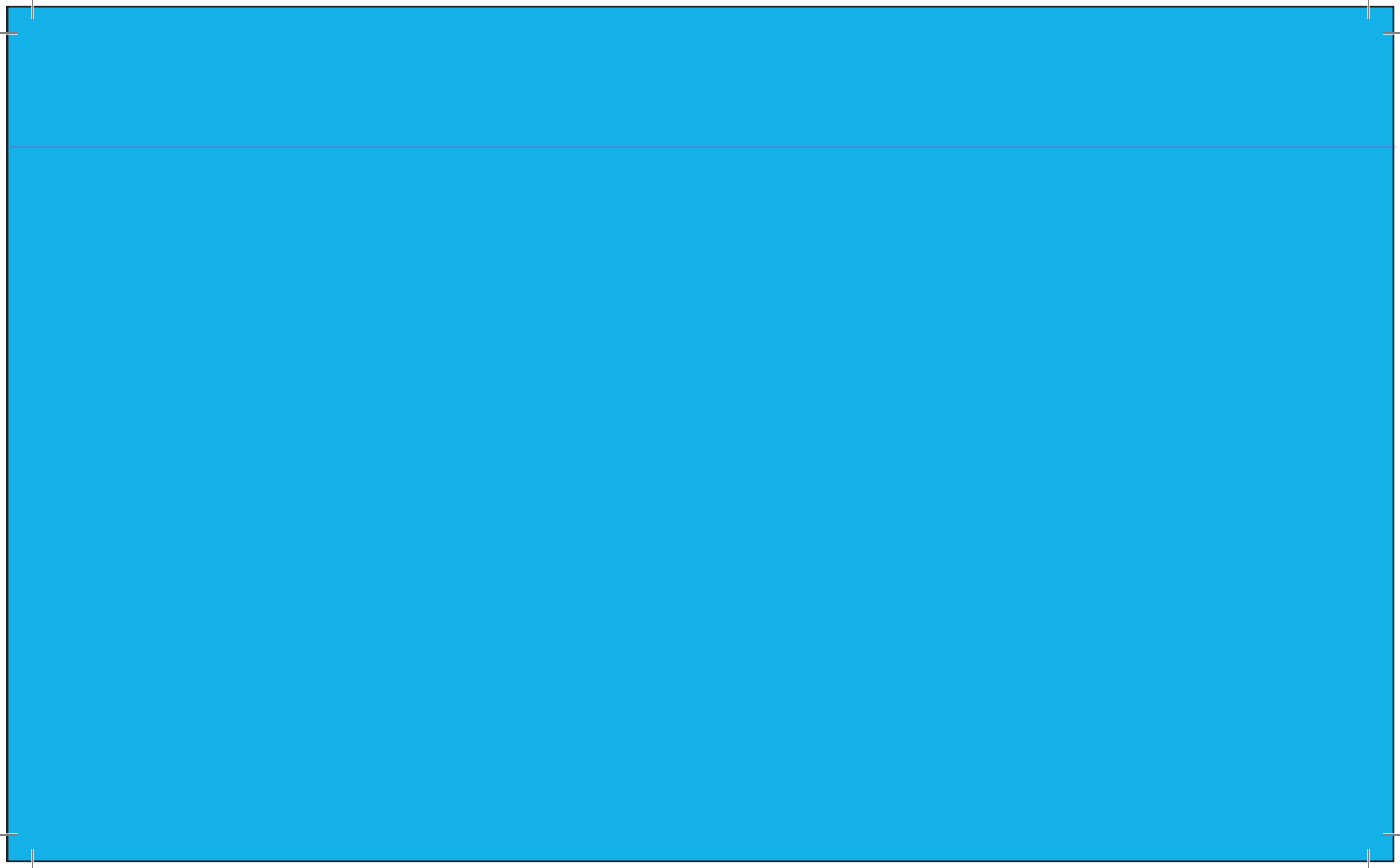

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